

REFERENCE TO CROSS-RELATED APPLICATION

This application claims priority to provisional application No. 60/449,766, filed on February 24, 2003.

HV
12/03/07

BACKGROUND OF THE INVENTION

1. Field of the Invention

The subject matter disclosed generally relates to the field of semiconductor lasers.

2. Background Information

Conventional laser diodes, which are fabricated from III-V compound semiconductors such as GaAlAs, InGaAlP and InGaAsP operate at wavelengths between 0.4 and 1.6 μm . Longer wavelengths in the mid-infrared range between 2 and 10 μm are required for important applications, including:

- Optical communications in the open atmosphere, which are highly vulnerable to scattering by fog and rain at conventional diode wavelengths shorter than 2 μm . By contrast, the atmosphere is much more transparent to wavelengths around 10 μm , where attenuation through fog can be as much as 150 db/km lower.